

## **Ehresmann connection for the canonical foliation on a manifold over a local algebra**

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### **Abstract**

For a canonical foliation on a manifold  $MA$  over a local algebra, the double-struck  $A$ -affine horizontal distribution complementary to the leaves, similar to the horizontal distribution of a higher order connection on the fiber bundle of double-struck  $A$ -jets, is defined. In the case of a complete manifold  $MA$ , the double-struck  $A$ -affine horizontal distribution is proved to be an Ehresmann connection in the sense of Blumental-Hebda. It is shown that the double-struck  $A$ -affine horizontal distribution on  $MA$  exists if and only if the Atiyah class of a certain foliated principal bundle vanishes. ©1996 Plenum Publishing Corporation.

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